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- (56)
- References Cited**

- U.S. PATENT DOCUMENTS

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|------------|------|---------|--------------------|--------------------------|
| 4,611,847 | A * | 9/1986 | Sullivan | B62D 35/001
296/180.2 |
| 7,188,875 | B2 * | 3/2007 | Norelius | B60R 13/001
293/118 |
| 8,235,432 | B2 * | 8/2012 | Ryan | B60R 19/381
280/163 |
| 8,303,025 | B2 * | 11/2012 | Senatro | B62D 35/001
180/903 |
| 8,899,660 | B1 * | 12/2014 | Praskovskaya | B62D 35/001
296/180.1 |
| 9,669,885 | B1 * | 6/2017 | Fahland | B62D 37/02 |
| 16,024,410 | A1 * | 8/2016 | Ishiba | B62D 35/008 |
| 17,013,707 | A1 * | 5/2017 | Povinelli | B62D 35/008 |

- * cited by examiner

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- (57) **ABSTRACT**

- A side-skirt system for a vehicle includes first and second side-skirts. The vehicle includes a vehicle body having a first body end facing oncoming ambient airflow when the vehicle is in motion, an opposing second body end, and first and second lateral body sides spanning a distance between the two body ends. The vehicle also includes at least one first road wheel proximate the first body end and at least one second road wheel proximate the second body end. The first and second side-skirts are mounted to the respective first and second lateral body sides between the respective first and second road wheels and configured to adjust respective magnitudes of aerodynamic disturbance at the lateral body sides when the vehicle is in motion. The system also includes a mechanism configured to shift the first and second side-skirts relative to the vehicle body and adjust the respective magnitudes of aerodynamic disturbance.

- 16 Claims, 3 Drawing Sheets**

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